us-10-071-411-6.rng

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October 21, 2003, 21:42:32 ; Search time 175.113 Seconds (without alignments) 323.724 Million cell updates/sec
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description	Human 5-11poxygena Human 5-11poxygena Human 5-11poxygena Human 5-11poxygena Human 5-11poxygena Human 5-11poxygena Human 5-11poxygena Human 5-11poxygena
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DB	48884484
% Query re Match Length DB I	21 2177 2183 2189 2189 2189 2189 2195
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ALIGNMENTS

ABT11118 standard; DNA; 21 BP.

RESULT 1

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Human; polymorphic region; 5-lipoxygenase; 5-LO gene; asthma; bronchitis; sinusitis; ulcerative colitis; nephritis; amyloidosis; sarcoidosis; rheumatoid arthritis; scleroderma; lupus; non-allergic rhinitis; polymyositis; Reliter's syndrome; psoriasis; pelvic inflammatory disease; atopic; contact dermatitis; forensic medicine; paternity testing; enzyme;
                                            Human 5-lipoxygenase gene related DNA sequence SEQ ID No 6.
                        (first entry)
                        05-DEC-2002
ABT11118;
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Homo sapiens.

WO200262825-A2.

15-AUG-2002.

08-FEB-2001; 2001US-267515P. 21-AUG-2001; 2001US-314248P. 07-FEB-2002; 2002WO-US03546.

(MILL-) MILLENNIUM PHARM INC

Barnes G, Meyer J;

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The invention relates to an isolated human nucleic acid molecule comprising an allelic variant of a polymorphic region of a 5-lipoxygenase (5-L0) gene, where the allelic variant comprises one or more nucleotide selected from any of 3, 20 or 21 base pair sequences, given in the specification, or their complement. The compositions and methods of the present invention are useful for diagnosing and/or prognosing disorders associated with an aberrant inflammatory response such as asthma, bronchitis, sinusitis, ulcerative colitis, nephritis, anyloidosis, chemnatoid arthritis, arcoidosis, scleroderma, lugus, non-allergic rhinitis, polymyositis, Reiter's syndrome, psoriasis, pelvic inflammatory disease, atopic and contact dermatitis. The nucleic acid molecules can also be useful for identifying an individual amongst other individuals this polymucleotide sequence represents DNA relating to the human 5-lipoxygenase (5-LO) gene of the invention.
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                                                    New isolated nucleic acid molecule with an allelic variant of a polymorphic region of an 5-10 gene, useful for diagnosing and/or prognosticating disorders associated with an aberrant inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inflammatory disease; polymorphism; 5-lipoxygenase; asthma; ulcerative colitis; bronchitis; sinusitis; psoriasis; rhinitis; arthritis; diagnosis; treatment; ds.
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                                                                                                                                                Claim 1; Page 235; 290pp; English.
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                                                                                                             response such as asthma
                   WPI; 2002-627522/67.
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Gaps
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                                               The present sequence was used in the development of a novel method for classifying patients suffering from an inflammatory disease. The method comprises identifying in DNA from at least 1 patient a sequence polymorphism, as compared with the normal 5-lipoxygenase [5-LOX] gene (AATR8431), in a 5-LOX requisatory gene sequence. The method can be applied to subjects with asthma, ulcerative colitis, bronchitis, sinusitis, psoriasis, allergic and mor-allergic rhinkits, lupus or rhemmatoid arthritis. Specifically it can be used to diagnose asthma or susceptibility to disease, identify treatments suitable for individual patients or assess the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence was used in the development of a novel method
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                                                                                                                                                                                                                               likely success of treatment.

N.B. Sequence not given in the specification, but constructed using the wild type human 5-lipoxygenase gene sequence given opages 40 to 41.
                                                                                                                                                                                                                                                                                                                                                        100.0%; Score 21; DB 18; Length 2177; 100.0%; Pred. No. 0.26;
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asthma; ulcerative colitis; bronchitis; sinusitis; psoriasis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human 5-lipoxygenase gene polymorphism 1669 to 1674 deletion.
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               Claim 13; Page -; 56pp; English.
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Best Local Similarity 100.
Matches 21; Conservative
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              colitis, bronchitis, sinusitis, psoriasis, allergic and morallergic rhinitis, lugus or rhematoid arthritis. Specifically it can be used to diagnose asthma or susceptibility to disease, identify treatments suitable for individual patients or assess the
                                                                                  likely success of treatment.
N.B. Sequence not given in the specification, but constructed using the wild type human 5-lipoxygenase gene sequence given on
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                                                                                                                                                                                                    Score 21; DB 18; Length 2183;
Pred. No. 0.22;
; Mismatches 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inflammatory disease; polymorphism; 5-lipoxygenase;
asthma; ulcerative colitis; bronchitis; sinusitis; psoriasis;
rhinitis; arthritis; diagnosis; treatment; ds.
The method can be applied to subjects with asthma, ulcerative
                                                                                                                                                                      Sequence 2183 BP; 541 A; 598 C; 659 G; 385 T; 0 other;
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100.0%;
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                                                                                                                                                                                                                                         21; Conservative
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                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                     pages 40 to 41.
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comprising an allelic variant of a polymorphic region of a 5-lipoxygenase (5-LO) gene, where the allelic variant comprises one or more nucleotide selected from any of 3, 20 or 21 base pair sequences, given in the specification, or their complement. The compositions and methods of the present invention are useful for diagnoshing and/or prognosing disorders associated with an aberrant inflammatory response such as asthma, bronchitis, sinusitis, ulcerative colitis, nephritis, amyloidosis, rhimitis, polymyositis, Reiter's syndrome, psoriasis, pelvic inflammatory disease, atopic and contact dermatitis. The nucleic acid molecules can also be useful for identifying an individual amongst other individuals from the same species for use in forensic medicine and paternity testing. This polymuclectide sequence respecsants DNA relating to the human 5-lipoxygenase (5-LO) gene of the invention.
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                                                                                                                                                                                                                                                                                                                                                      Human, polymorphic region; 5-lipoxygenase; 5-LO gene; asthma; bronchitis; sinusitis; ulcerative colitis; nephritis; amyloidosis; sarcoidosis; rheumatoid arthritis; scleroderma; lupus; non-allergic rhinitis; polymyositis; Reiter's syndrome; psoriasis; pelvic inflammatory disease; atopic; contact dermatitis; forensic medicine; paternity testing; enzyme;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                polymorphic region of an 5-LO gene, useful for diagnosing and/or prognosticating disorders associated with an aberrant inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to an isolated human nucleic acid molecule
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New isolated nucleic acid molecule with an allelic variant of a
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100.0%; Score 21; DB 18; Length 2189; 100.0%; Pred. No. 0.22;
                                                                                                                                                                                                                                                                                                                    Human 5-lipoxygenase gene related DNA sequence SEQ ID No 1.
                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2189 BP; 541 A; 599 C; 664 G; 385 T; 0 other;
                                   ·,
                                     0; Mismatches
                                                                                     990 AGGAGCGCGAAACCTTCTC 1010
                                                                         1 AGGAGGGGGGGAAACCTTCTC 21
                                                                                                                                                                                                           ABT11113 standard; DNA; 2189 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 6; Fig 1; 290pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (MILL-) MILLENNIUM PHARM INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-FEB-2001; 2001US-267515P.
21-AUG-2001; 2001US-314248P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       07-FEB-2002; 2002WO-US03546.
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Best Local Similarity 100.v
                                                                                                                                                                                                                                                                                  05-DEC-2002 (first entry)
             Best_Local Similarity 100.
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    response such as asthma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2002-627522/67.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Barnes G, Meyer J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200262825-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-AUG-2002.
                                                                                                                                                                                                                                             ABT11113;
   Query Match
                                                                                                                                                                     RESULT 5
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Sequence 2189 BP; 541 A; 599 C; 664 G; 385 T; 0 other;

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Local Similarity 100.0%;
nes 21; Conservative (
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                                                                                                                                                                                                                                                                                                                                                                                                                    97US-0846020
                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1997-558997/51.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Beier D,
                                                                                                                                                                                                                                                                    Homo sapiens,
                                                                                                                                                                                                                                                                                                                WO9742347-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                    25-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                  29-APR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                  06-MAY-1996;
                                                                                                                                                                                                                                                                                                                                                  13-NOV-1997.
                                                                                                                               14-MAY-1998
                                                                                                                                                                                                                                                                                  Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Asano K,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                               AAT88434;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 8
                                        AAT88434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABT11173
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a method of screening a subject suffering from a respiratory disease which can be treated with a leukotriene receptor antagonist. The method comprises determining the genorype of the DNA at a polymorphic allele site in the 5-lipoxygenase gene and a polymorphic allelic site in the INC4 synthase gene, where different genotypes at these sites are associated with different incidences of a phenotypic response to the treatment. The method is useful for screening a subject suffering from a respiratory disease, which can be treated with a leukotriene receptor antagonist, particularly asthma, as an aid in predicting the subject's response to the treatment. The present sequence is human 5-lipoxygenase (ALOX5) gene partial coding sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Screening a subject suffering from a respiratory disease that can be treated with a leukotriene receptor antagonist, by determining the genotype of the DNA at a polymorphic allele site in the 5-lipoxygenase gene and LTC4 synthase gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Emmett AH, Pillai S, Sprankel CS;
                                                                                                                                                                                                                                 Human; 5-lipoxygenase; ALOX5; respiratory disease; therapy; asthma; leukotriene receptor antagonist; ds.
                                                                                                                                                                                                 Human 5-lipoxygenase (ALOX5) gene partial coding sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 2189 BP; 541 A; 599 C; 664 G; 385 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= b
/note= "Spl binding motif (GGGCGG)"
1845..1847
                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= c
/note= "Translation start site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; Page 12-13; 67pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            990 AGGAGGGGGGGAAACCTTCTC 1010
                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
1669..1698
              990 AGGAGCGCGCGAAACCTTCTC 1010
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                                                                                                                                                                                                                                                                                                                                                                /rpt_type= TANDEM
                                                                                               AAD24657 standard; DNA; 2189 BP.
17-APR-2000; 2000US-197913P.
29-SEP-2000; 2000US-236608P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-APR-2001; 2001WO-US12534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Anderson WH, Edwards LD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 100.0 nes 21; Conservative
                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                    '*taq= a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GLAX ) GLAXO GROUP LTD.
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                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                   12-MAR-2002
                                                                                                                                                                                                                                                                                      Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                     repeat_unit
                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_signal
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                                                                                                                                 AAD24657;
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                                                                 RESULT 6
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Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence was used in the development of a novel method for classifying patients suffering from an inflammatory disease. The method comprises identifying in DNA from at least 1 patient a sequence polymorphism, as compared with the normal 5-lipoxygenase (5-LOX) gene (AAT88431), in a 5-LOX requisatory gene sequence. The method can be applied to subjects with asthma, ulcerative colitis, bronchitis, sinusitis, psoriasis, allergic and non-allergic thinitis, lupus or rheumatoid arthritis. Specifically it can be used to diagnose asthma or susceptibility to disease, identify treatments suitable for individual patients or assess the
                                                                                                                                                                                                                                                       Human 5-lipoxygenase gene polymorphism 1688 (GGGCGG) 6 bp addition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       likely success of treatment.

N.B. Sequence not given in the specification, but constructed using the wild type human 5-lipoxygenase gene sequence given on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%; Score 21; DB 18; Length 2195; 100.0%; Pred. No. 0.22; 0; Indels 0;
                                                                                                                                                                                                                                                                                                                                    Inflammatory disease; polymorphism; 5-lipoxygenase; asthma; ulcerative colitis; bronchitis; sinusitis; psoriasis; rhinitis; arthritis; diagnosis; treatment; ds.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Drazen JM, Grobholz J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      990 AGGAGGGGGGAAACCTTCTC 1010
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AAT88434 standard; DNA; 2195 BP
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